

METHOD FOR CORRECTING MAGNETIC FIELD DRIFT OF NMR IMAGING APPARATUS

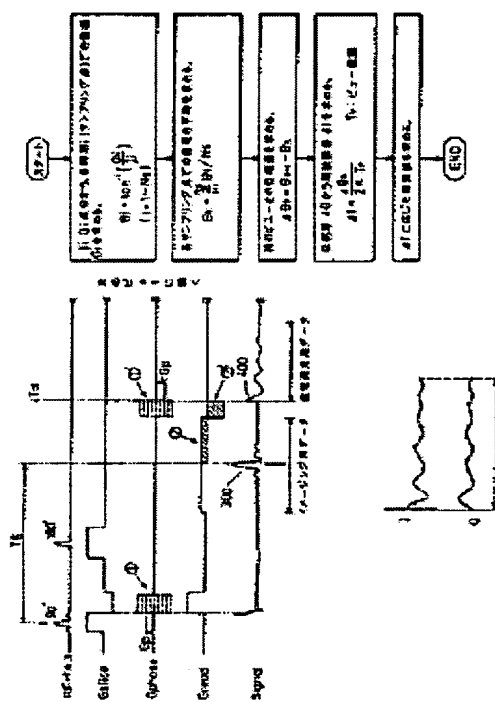
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Inventor: INOUE YUJI
Applicant: YOKOGAWA MEDICAL SYST LTD
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Abstract of JP1141656

PURPOSE: To prevent the deterioration of image quality due to magnetic field drift by measuring a main magnetic field with high accuracy without elongating a scanning time, by collecting a signal for measuring the drift quantity of the main magnetic field to perform the orthogonal detection of said signal and subsequently correcting the drift of the main magnetic field corresponding to the variation quantity of a phase at every view.

CONSTITUTION: An FID signal for measuring a main magnetic field is separated into complex data I, Q and sampled at H points at a predetermined time interval. The correction quantity of the drift of the main magnetic field is calculated from the data I, Q. At first, the phase of the FID signal of the K-th view at each sampling point is calculated and, next, the phase difference between the phase θ_{K-1} of the K-th view and the phase θ_{K-1} of the previous (K-1)-th view is calculated. Finally, the corrected current value flowing to a coil is adjusted and the variation of the main magnetic field is corrected. As mentioned above, since the phase of the FID signal for measuring the main magnetic field is directly calculated without analyzing frequency and the drift quantity of the main magnetic field is calculated from the variation quantity of a phase at every view, the drift of a magnetic field can be measured with high accuracy without prolonging scanning time.



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